NEWSLINE

Published weekly for employees of Lawrence Livermore National Laboratory *Friday, March 1, 2002* *Vol. 27, No. 9*

NNSA announces reorganization

Administrator John Gordon this week outlined his plans to eliminate a layer in the National Nuclear Security Administration's field management and streamline the operation of the nation's nuclear weapons complex.

Though no specifics were announced, the plan will include a mixture of redeployment and retraining of some employees at the Oakland Operations Office and Livermore Site Office.

Gordon announced his decision to NNSA employees and contractors Monday and again on Tuesday in a report to the House Armed Services Special Oversight Panel.

"For many months now, NNSA's leadership has been working to craft a restructuring plan to improve the effectiveness and efficiency of our operations," Gordon said in a letter to NNSA colleagues. "We've done this not only because Congress directed us to do so, but also because it is the right thing to do for the benefit of the American people, our national security missions and ourselves."

When the realignment is fully implemented

See **NNSA,** *page 8*

Lab to unveil administrative workload reduction effort

In an effort to reduce the administrative workload of scientists, engineers and other researchers, a team led by associate deputy Directors Merna Hurd and Lee Younker are looking into ways to streamline operational requirements at the Laboratory.

Called the Workload Reduction Initiative, the effort was borne from suggestions made in

See **WORKLOAD,** *page 8*

FROM THE DIRECTOR'S OFFICE

Jeff Wadsworth

Grand Challenge call generates exciting ideas

In January, I issued an invitation to all Laboratory scientists and engineers to submit ideas for a new research and development (R&D) investment category — the Grand Challenge — potentially one of the most ambitious initiatives to support far reaching R&D in recent times. This Grand Challenge category (see http://ldrd.llnl.gov/ProposalSubmittal/LSTO.html) is designed to address compelling national-level problems that can engage the Laboratory's broad capabilities, e.g., integrating high-performance computing, advanced simulation tools, and disparate types of experiments and facilities. The Laboratory's strength as an institution relies on the vitality of our scientific and technical creativity.

With the Grand Challenge category, we have an exciting opportunity to focus the Laboratory's unique multidisciplinary expertise and capabilities to generate major scientific and technological breakthroughs and to meet the nation's current and future challenges.

I am pleased to report that the response from the Laboratory scientific community has been very positive. To date, we've received nearly 40 Grand Challenge ideas — and they're all very interesting, representing the breadth and depth of our multidisciplinary talent. The ideas we received so far cover the broad spectrum of scientif-

See **DIRECTOR'S OFFICE,** *page 8*

Lab hosts ROTC Day

FRANK NUNEZ/TID

Kurt Gunderson of Physics & Advanced Technologies explains a gondola for a balloon-borne high energy gamma ray telescope to cadets and midshipmen visiting the Lab as part of ROTC Day Tuesday. More than 75 students took part in the event, hosted by the Lab's National Security office and STEP.

BBRP restructures, adds new divisions

By Stephen Wampler
NEWSLINE STAFF WRITER

With an eye toward meeting its scientific challenges for the next five years, the Biology and Biotechnology Research Program has been restructured, moving from two divisions to six.

"During the past decade, our program focused extensively and successfully on the Human Genome Project," said acting BBRP Associate Director Bert Weinstein. "We now need to consider what the post-genomics era looks like."

Throughout the summer and fall of 2001, the leadership of the directorate and its outside review panel examined what the mission and science of BBRP should be in three to five years.

"We concluded we should use

See **BBRP,** *page 7*

It's warm, it's dark and it matters

By David Schwoegler
NEWSLINE STAFF WRITER

It's the hinterland of science, where uncertainties prevail. It's a place where we seek equations of state, but where systems are not always in equilibrium. It's the unpredictable transition that all materials pass through in the flux between solid state and plasma. It's a regime where "a shock is a shock, is a shock," but where the results may vary with the source of the shock. It's most definitely a new research frontier—and it may be a grand challenge.

Sound confusing? Some Lab researchers thought so and organized the first annual workshop on extreme states of materials to study a phenomenon called "warm dense matter," a term that originated at Livermore.

The Materials Research Institute organized this unclassified workshop, held off site in Livermore Feb. 20–22. Collaborators came from as

See **MATTER,** *page 8*

1960: Tests go hyrdrodynamic

— Page 3

Workshop on security issues

— Page 5

New training opportunities

— Insert

LAB COMMUNITY NEWS

Weekly Calendar

Technical Meeting Calendar, page 4

Saturday 2

The **entrance to UNCLE Credit Union** will be under construction. The Paint Shop will be working on new traffic direction signs, adding more roadway markers, stop bar, one way, and do not enter signs. Contact: Jon Laurant, 3-1099.

Tuesday 5

The Lab is hosting a **free tax workshop for foreign nationals** whose tax filing status is non-resident. The workshop will be held from 2-4 p.m. in Bldg. 571, rooms 1301 and 1335. UC Berkeley will offer this workshop for both international employees and visiting international scholars (Participating Guests, Student Guests). J-1 scholars/students whose tax filing status is non-resident and whose total support during 2001 came from sources outside the United States need not attend the tax workshop but must still complete form 8843. Contact: Jeanne Robinson, 2-2014.

• • •

A representative from **Fidelity Investments** will be on-site to meet with employees today and Wednesday, and March 20-21. Fidelity Investments are available to UC's 403(b) participants in addition to the UC-managed investment funds. To schedule an appointment, call Fidelity at 1-800-642-7131. Be sure to specify you are an LLNL employee.

• • •

As part of the Desktop Acquisition Program, **Dell Computer Corp**. will display some of its current systems in the Bldg. 543 lobby. A morning session, 10-11:30 a.m., will be devoted to Dell's EMC enterprise storage solutions; the afternoon session, 1-2 p.m., will discuss Dell's professional services, desktop and enterprise support. Contact: Candace Gittins, gittins1@llnl.gov.

Up & Coming

Nolan Thornberry from Chevron Texaco will present **"Repetitive Stress Injury Prevention Plan: Chevron's Standard for Preventing Computer-related RSIs,"** on Tuesday, March 12, at 10 a.m. in the Bldg. 361 auditorium. The talk, sponsored by the Lab's Ergonomics committee, will cover many of the concerns of ergonomic evaluators as well as employees who use a computer at work.

• • •

B Division's spring book sale will return March 11-15, 11:30 a.m. to 1:30 p.m., in Bldg. 132, room 1200 (Q- or L-cleared access only). Used books, videos, CDs and books-on-tape are needed; all proceeds are used to buy Christmas gifts for needy children. Collection boxes are available in the lobby of Bldg. 132; B663 (Health Services); and B253, room 1531, or call Lynn Groves, 2-1684.

• • •

The **Livermore Valley Coin Club** will hold its 39th annual coin show and sale on Sunday, March 10, from 10 a.m. to 5 p.m., at the Elks Lodge in Springtown.

Saturday talk illuminates galaxy

In the final Science on Saturday presentation for this year, Laboratory research astronomer Wil van Breugel will present, "How Galaxies Are Formed — Starbursts Forever," on Saturday, March 2, at 9:30 a.m. in the Lab's Bldg. 123 auditorium.

In this presentation, students will learn how galaxies and stars form, and how stars are born in large groups ("starbursts") inside the cold, interstellar clouds of galaxies, and how stars die. Van Breugel and his co-presenter, science teacher Barry Marson of Tokay High School, Lodi, will also discuss how galaxy collisions trigger the most dramatic starbursts of all, and how these build larger galaxies and may trigger active, supermassive black holes. Students will see examples of the Lab's ongoing research and development in instrumentation and observing techniques.

Science on Saturday 2002

LLNL's Science on Saturday program is a five-week series of free 90-minute talks geared toward middle and senior high school students. This is the last talk in the series. It is open to students, their parents or guardians, and teachers. Registration is at the door and seating is available on a first-come, first-served basis, with priority given to students. All Science on Saturday visitors must enter the Laboratory through the southwest entrance on East Avenue.

For more information, check the Website at http://education.llnl.gov/sos or e-mail the Lab's Science and Technology Education Program at education@llnl.gov.

IN MEMORIAM

Terry Biggs

Terry Biggs, the lead Health & Safety Technician for the Energy & Environment Directorate, died on Saturday, Feb. 9. He was 51.

Biggs started working at the Laboratory nearly five years ago as a Laidlaw contractor through EPD, providing primary waste technician support to the Earth & Environmental Science and Energy directorates. He had worked as the lead health and safety technician for the last two years.

"Terry loved working at the Lab. He had so much love and support there," said Kristi Taylor, his partner of 16 years.

A resident of Los Gatos, Biggs was originally from Oklahoma City. He was an outdoorsman and his favorite place to visit was Yosemite National Park.

Biggs is survived by his life partner, Kristi Taylor, of Los Gatos; daughter Sarah Thomas of Texas; sons, Zackary Biggs of Cupertino and Shawn Taylor of Turlock; and two grandchildren.

Services have been held and his remains will be spread in Yosemite.

Contributions in his memory may be made to Yosemite National Park. His supervisor, Mark Costella, is collecting money for a donation to the park in Biggs' memory. For more information, Costella can be reached at 2-8999.

Harold P. Furth

Harold Furth, a former Lab astrophysicist who originated the Tokamak Fusion Test Reactor, died Feb. 21 of heart failure in Philadelphia. He was 72.

A native of Vienna, Furth came to the Untied States in 1941 and earned a doctorate from Harvard. He joined the Lab in the 1950s and left in 1967 for a research post at Princeton University. He taught until 1999 and continued his research until shortly before his death.

Furth, who devoted his career to research on controlled fusion and held 20 patents, conceived the Tokamak project in the early '70s. It was the most advanced and highest performance fusion device ever constructed in the United States and produced world record-setting scientific results before closing down in 1977.

Furth's work earned him an E.O. Lawrence award in 1974. He served on several committees and panels for the departments of Defense and Energy, NASA and the National Academy of Sciences.

Herbert A. Massey

Herbert Massey, a Lab retiree, died Feb. 11 at his home in Manteca.

Massey was a senior technologist, working in Mechanical Engineering for more than 30 years before retiring in 1990.

Born in Claypool, Ariz., he lived in Tracy for 30 years before moving to Manteca 12 years ago. He was a member of and officer of Mount Oso Lodge and a member of Stockton Scottish Rite, the San Joaquin Shrine Club, Tyrian Lodge and Escalon Shrine Club.

He served in the Merchant Marines from 1945-47, the Navy from 1947-50, and was a volunteer fireman for the city of Tracy.

Survivors include his wife Emma; children Sheri, Loren and Lori; seven grandchildren and two great-grandchildren.

Richard F. Zolling

Services for Lab retiree Richard "Dick" Zolling will be held Friday, March 8, at 2 p.m. at the Pioneer Chapel of Eden United Church of Christ Congregational in Hayward.

Zolling passed away on Feb. 16. He was 80.

Zolling, who was a third-generation Californian, was born in Oakland and graduated from Oakland High School. He attended San Francisco City College before enlisting in the U.S. Navy in 1942. He served during World War II and was discharged in 1945.

He started working at the Lab in 1954 and retired in 1986 from Electronics Engineering.

After retirement, Zolling and his wife of 52 years, Glenna, traveled extensively. One of his favorite hobbies was photography.

In addition to his wife, Zolling is survived by daughter Nancy Zolling of Castro Valley; son David Zolling of Rocklin; three grandsons and two great-granddaughters.

Contributions in his memory may be made to the Alzheimer's Association or a favorite charity.

Newsline

Newsline **is published weekly by the Internal Communications Department, Public Affairs Office, Lawrence Livermore National Laboratory (LLNL), for Laboratory employees and retirees.**

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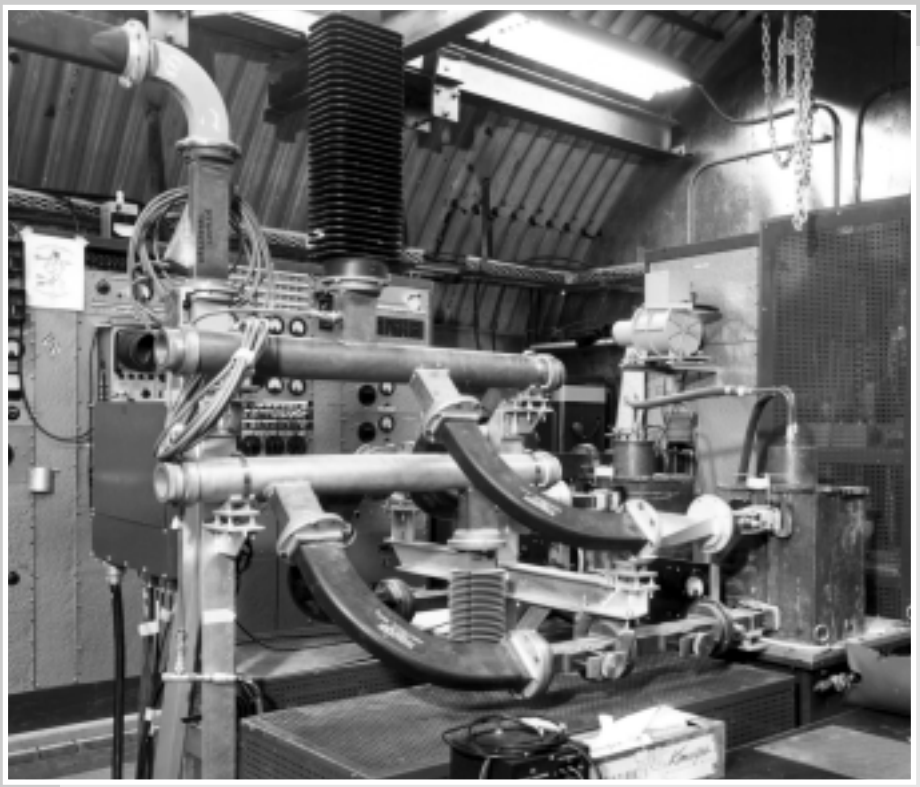
1952 – 2002
MAKING HISTORY, MAKING A DIFFERENCE

Exceptional contributions to nuclear energy

This is an ongoing feature highlighting the Lab's 50-year history. This week we take a look at the year 1960.

Site 300, the Laboratory's remote experimental test site, was a busy place in 1960. In the midst of a nuclear testing moratorium, Livermore was enhancing its non-nuclear testing capabilities. A new linear accelerator (linac) was being delivered that superceded the capabilities of the XR2 machine, which had been moved to Site 300 from Sugar Bunker at the Nevada Test Site.

Meanwhile, in another part of the Laboratory, Nicholas Christofilos, one of the most original thinkers in physics of his generation, was pursuing a magnetic fusion concept, Astron. Astron required the invention of a new kind of electron accelerator, the induction linear accelerator (or induction linac), to produce an intense circulating electron beam to magnetically confine and heat a plasma. Induction linacs are now the heart of the nation's two modern hydrodynamic testing facilities, the Contained Firing Facility at Site 300 and the Dual Axis Radiographic Hydrodynamic Test Facility (DARHT) at Los Alamos. They are used to generate the powerful X ray flashes needed to photograph mock nuclear-weapon primaries as they implode.



XR2 accelerator at NTS Sugar Bunker, used to enhance non-nuclear testing capability in 1960.

HYDRODYNAMIC 1960 testing

Around the world
- France acquires atomic capability, conducts first test
- Communists in Vietnam seek to overthrow president
- U.S. U-2 aircraft shot down over USSR
- U.S. launches Polaris sea patrol
- Sputnik 5, with a crew of two dogs, orbits and returns safely
- Summer Olympics in Rome, Italy

Around the nation
- John F. Kennedy elected president
- First laser perfected at Hughes lab by Theodore Maiman
- Top films: *The Magnificent Seven* and *Psycho*
- "The Twist" tops charts and starts a new dance craze
- First study results link cigarettes with heart disease
- First oral contraceptives available to the public

Around the Lab
- Lab population approaches 4,200
- Harold Brown is Lab director
- Work to explore application of lasers begins

See the Timeline: http://www.llnl.gov/timeline/ **See anniversary stories: http://www-r.llnl.gov/50th_anniversary/history.htm**

in other NEWS

Significant events around the world, the nation and at the Lab.

Deadline extended: March 1

Send Us Your 'Lab Life' Story

Stories are pouring in for the "50 Years of Stories" publication, in honor of the Lab's 50th anniversary. After looking at the stories received and after interviewing many people, we're discovering that there are some patterns emerging. We'd like to hear more stories about:

1. Meeting your significant other at the Lab.
2. Family stories. Growing up in a Lab family, for instance.
3. Practical jokes
4. Ingenuity on the job
5. "Cooler" stories
6. Work partnerships formed with extraordinary people
7. Work travel stories (other than NTS & and Pacific testing)
8. Strange discoveries.
9. Superhuman efforts to get the job done.

Send your stories to Laurie Powers, L-664, powers12@llnl.gov, (925) 423-9868
You may also submit stories on the Web at http://www. llnl.gov/50th_anniv/story.htm.

Sound off on 'Lab speak'

In honor of the Lab's 50th anniversary, we're collecting a list of phrases and other 'Labspeak' you'll only find within the confines of the gates. They can be phrases that are funny, odd, or simply make sense to no one — and yet you find yourself using them every day.

Your name (optional): _____ **Your ext.** _____

"Lab speak" nomination: _____

_____

_____

Comments (optional):

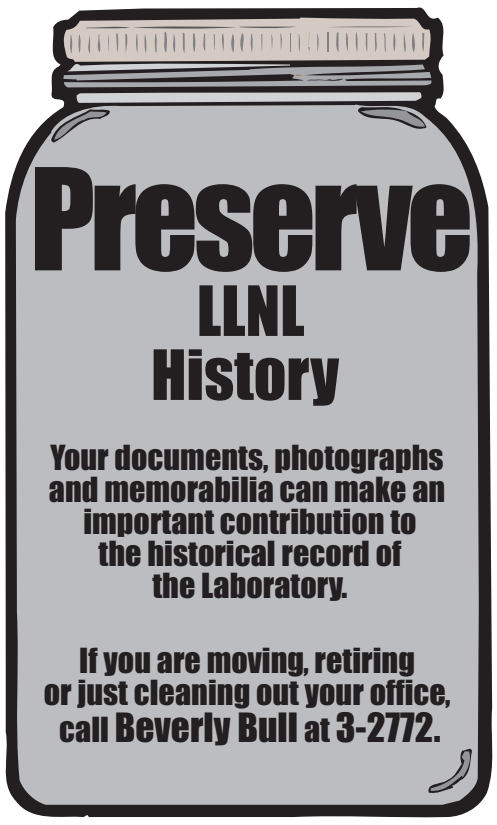
_____

_____

Return form to:
Newsline
Attn: Lynda Seaver, L-797

Lawrence Livermore National Laboratory
Making History Making a Difference
1952-2002

NEWS YOU CAN USE



INTERNAL TRANSFER OPPORTUNITIES

Tag	Requisition	Classification	Title	Organization
ME	3682	105.3	Division administrator	Mechanical Engineering/NTED
TI	3702	164.3	Technical editor/writer III	NIF-TID Document Services
EZ	3696	200	Division leader	Energy & Environment
EZ	3714	200	Division leader	Energy & Environment
PT	3659	220	Postdoc research staff	Physics & Advanced Technologies
BS	3711	225	Biomedical scientist	Biology & Biotechnology Research
CH	3072	242	Chemist	Chemistry & Materials Science
CH	3676	249	Optics processing engineer	Chemistry & Materials Science
ME	3698	249	Mechanical design engineer	Mechanical Engineering
PE	3553	249	Engineer/site planner	Plant Engineering Department
PE	3666	249	Engineer/civil planner	Plant Engineering Department
EE	3720	(249.0/285.0)	Computer scientist/engineer	Electronics Engineering/EETD
CO	2877	285	Computer scientist	CAR/Computer Applications
CO	3672	285	Computer scientist	Computing Applications & Research
CO	3675	285	Computer scientist	Computing Applications & Research
CO	3686	285	Division leader	Computer Systems & Support
CO	3700	285	Computer scientist	Computing Applications & Research
EE	2074	(285.0/249.0)	Computer scientist/engineer	Electronics Engineering/EETD
HR	2611	405.3	Administrative specialist III	Human Resources/EODD
PE	2826	405.3	Administrative specialist III	Plant Engineering Department
CH	3684	405.4	Administrative specialist IV	Chemistry & Materials Science
NF	3544	405.4	Administrative specialist IV	National Ignition Facility Project
PT	3688	405.4	Administrative specialist IV	Physics & Advanced Technologies
PE	2950	824.1	Electrician	Plant Engineering

Technical Meeting Calendar

Friday 1

MATERIALS RESEARCH INSTITUTE
"Computational Materials Science and Chemistry Summer Institute." The Institute will run from mid-June to mid-August. To be considered, prospective participants need to fill out the interest form at http://education.llnl.gov/mri/. The deadline to apply is March 1. Questions should be addressed to Mike McElfresh, 2-8686.

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS
"Black Holes: Demographics and Galaxy Evolution," by David Merritt, Rutgers University. Noon, Bldg. 319, room 205 (badge required). Contacts: Adam Stanford, 3-6013, or Josie Morgado, 4-5201.

H DIVISION
"Optical Spectroscopy at Multimegabar Pressures: Recent and Future," by Alexander Goncharov, Carnegie Institution of Washington. 10:30 a.m., Bldg. 219, room 163 (badge required). Contacts: Choong-Shik Yoo, 2-5848, Donna Vercelli, 2-0976.

Monday 4

UC DAVIS, DEPARTMENT OF APPLIED SCIENCE
"Development and characterization of new crystals for nonlinear frequency conversion and mid-infrared lasers" by John J. Adams, UC Davis, Department of Applied Science graduate student. 4 p.m., Bldg. 661 (Hertz Hall), room 7 (open area). Refreshments served at 3:30 p.m. for a "meet the speaker" session before seminar. Contact: Estelle Miller, 2-9787.

Tuesday 5

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH
"Smarter Memory Controllers: Improving Memory System Performance from the Bottom Up," by Sally McKee, University of Utah. 10 a.m., Bldg. 451, room 1025 (property protection area). Contacts: Bronis de Supinski, 2-1062, or Leslie Bills 3-8927

PHYSICS & ADVANCED TECHNOLOGY
"Extreme Materials Research with Diamond-Anvil Cells," by Choong-Shik Yoo. 2 p.m., Bldg. 123, conference room A (badge required). Contact: Leslee J. Markham, 3-9699.

CHEMISTRY AND MATERIALS SCIENCE, NEW FRONTIERS SYMPOSIUM
"Quantum Architecture of Novel Solids" by Alex Zunger, director, Solid State Theory Group, National Renewable Energy Laboratory, Golden, Colo. 3:30 p.m., Bldg. 235 Gold Room. Contact: Michael Fluss, fluss1@llnl.gov or 3-6665, or Kristine Ramirez, ramirez24@llnl.gov or 3-4681.

DESKTOP ACQUISITION PROGRAM
As part of the Desktop Acquisition Program (DAP), Dell Computer Corp. will visit the Lab in Bldg. 543 auditorium and lobby area. Some of the current DAP systems will be set up for viewing in the lobby area, while presentations occur in the auditorium. The morning session, 10-11:30 a.m., will be devoted to Dell's EMC enterprise storage solutions; the afternoon session, 1-2 p.m. will discuss Dell's professional services, desktop and enterprise support. Contact: Candace Gittins, gittins1@llnl.gov.

Wednesday 6

MATERIALS RESEARCH INSTITUTE SEMINAR
"EOS Measurements of D2 With Magnetically Driven Flyer Plates," by Marcus Knudson, Sandia National Laboratories. 3:30 p.m., Bldg. 219, room 163. Technical contact: Bill Nellis 2-7200. Admin contact: Joanna Allen 2-0620.

Thursday 7

CHEMISTRY & MATERIALS SCIENCE
"Modeling Dislocation Energetics and Dynamics in Materials," by Jeffrey M. Rickman, Lehigh University, 2 p.m., Bldg. 235, room 1090 (uncleared area). Contacts: Vasily Bulatov, 3-0124, or Linda Jones, 3-8839.

Friday 8

D&NT COLLOQUIUM
"Lessons Learned in My Years at DTRA" by Jay Davis, LLNL. 10:30 a.m. Bldg. 132 auditorium, room 1000 (cleared area) SRD presentation. Contact: Linda Stuart, 3-7001

INSTITUTE FOR GEOPHYSICS & PLANETARY PHYSICS
"Precision Cosmology with Galaxy Cluster Surveys?" by Joseph Mohr, University of Illinois. Noon, Bldg. 319, room 205. (Please note: all attendees need to be badged.) Technical host: Adam Stanford, 3-6013. Administrative contact: Josie Morgado, 4-5201. http://www.llnl.gov/urp/IGPP/SemCalendar/IGPPSemCal.html

PHYSICS & ADVANCED TECHNOLOGIES
"Neutrino Oscillations and the Future of Life Underground," by Nathaniel Longley, Macalester College, St. Paul, MN. 10:30 am, Bldg. 211, room 227 (badge required). Contacts: Peter Barnes, 2-3384, or Pat Smith, 2-0920.

INSTITUTE FOR SCIENTIFIC COMPUTING RESEARCH
"A Hybrid Particle Level Set Method for Improved Interface Capturing," by Doug Enright, Stanford University. 10 a.m., Bldg. 451, room 1025 (property protection area). Contacts: Dan Quinlan, 3-2668, or Leslie Bills, 3-8927.

The deadline for the next Technical Meeting Calendar is noon, Wednesday.

Send your input to tmc-submit@llnl.gov. For information on electronic mail or the newsgroup llnl.meeting, contact the registrar at registrar@llnl.gov.

NEWS OF NOTE

Lab scientists conduct workshop on security issues

By Don Johnston
NEWSLINE STAFF WRITER

Laboratory scientists conducted a workshop in Washington, D.C. recently to inform Congress and policymakers of ways in which science and technology collaborations can advance regional stability and security in Central Asia.

Co-hosted by Reps. Curt Weldon and Ellen Tauscher, the Feb. 14 workshop for congressional aides and representatives from federal agencies featured Gen. (ret.) Anthony Zinni, former head of the U.S. Central Command. Rep. Jane Harman of Southern California also participated.

Jeff Richardson, deputy program leader for Proliferation Prevention and Arms Control in the Nonproliferation, Arms Control, and International Security (NAI) Directorate, discussed how Lab expertise in border security, detection systems, and energy and environmental modeling complement the capabilities of Central Asian scientists and facilitate the formation of collaborative projects. These projects address problems that affect regional stability, like radionuclide contamination of the arid region's water resources, and help build indigenous capacity.

"By collaborating with agencies working in Central Asia, we have the opportunity to help bring stability to the region and thereby advance U.S. national security," Richardson said. "Scientific and technical collaborations promote regional cooperation. Science transcends national boundaries and uses a common language."

The U.S. Central Command (USCENTCOM) is using a strategy of regional engagement, an effort to promote cooperation with and among Central Asian nations by engaging them in collaborative efforts to develop plans for responding to disasters such as floods or earthquakes.

Such projects support USCENTCOM's goals to foster peaceful states, promote regional cooperation on deterring weapons of mass destruction, counter drug trafficking and terrorism, integrate states into international security and economic organizations, and promote military professionalism.

"Environmental Security will be USCENTCOM's primary option for assuring and engaging the Central Asian states and promoting multilateral cooperation," stated a U.S. Central Command conference report from March 2001, "Responding to The Environmental Challenges in Central Asia and the Caspian Sea Basin."

Rep. Ellen Tauscher (right) address conference participants in Washington, D.C., as Reps. Jane Harman and Curt Weldon look on.

Zinni described some of the challenges that Central Asian nations face, including religious fundamentalism, military reform, the pull or influence of regional powers such as China, India and Pakistan, a lack of regional identity, economic development, the political and economic legacy of the former Soviet Union, democracy and human rights, environmental pollution and border security issues related to the smuggling of drugs and weapons of mass destruction.

In his presentation following Zinni's talk, Richardson said, "Science and technology provide a basis to engage these Central Asian republics in both bilateral and, ultimately, multilateral projects.

"The Laboratory is particularly well positioned to implement science and technology projects and support the U.S. Central Command engagement strategy," he said, citing the Lab's historical mission in nuclear weapons design, safeguarding the stockpile and preventing, countering and responding to proliferation and terrorism.

Richardson said Laboratory capabilities, such as characterization techniques for detecting and identifying radioactive material, address both "environmental stress" and security issues.

"Radiation detection is involved in border security to prevent illicit smuggling and in environmental assessments to address the radioactive legacy of Soviet uranium mining and manufacturing and nuclear weapons testing in Central Asia."

Laboratory work in Central Asia is not new. NAI has been working on environmental security issues for the last five years. Since mid-2000, Laboratory scientists have conducted fact-finding missions to Kyrgyzstan and Kazakhstan. In May 2001, Lab scientists held a workshop in Almaty, Kazakhstan, on radionuclide contamination of Kazakhstan's water resources.

Working with Uzbeki scientists and government officials, Livermore helped equip key Uzbekistan border crossings with commercial, state-of-the-art pedestrian and vehicle portal monitors to detect radioactive materials.

"We have on-the-ground experience working in the region," said Nina Rosenberg, a Lab geoscientist who participated in the Washington D.C. workshop. Other Lab scientists who have worked in Central Asia include Richard Knapp, Dave Smith, Andy Tompson and Richard Ragaini.

Richardson noted that LLNL's Center for Global Security Research, under the leadership of Ron Lehman and Eileen Vergino, has been instrumental in supporting and guiding the Laboratory's exploration of how science and technology can contribute to security in Central Asia. Debbie Ball and Jay Zucca from NAI also participated in the D.C. workshop.

At the conclusion of Richardson's presentation, Rosenberg demonstrated LLNL's Global Environmental Threat and Consequence Analysis Tool, or GETCAT, a tool that has the potential to be applied to emergency response and disaster planning, such as might be needed in the event of a flood or earthquake.

"There's a lot of interest in what the Lab is doing. The workshop was really exciting," Rosenberg said. "We got a lot of positive feedback."

Lab scientists have been invited to an April workshop on environmental security in Central Asia sponsored by U.S. Central Command, to be held in Chiemsee, Germany.

Join your co-workers in fighting cancer

Purchase a bunch of freshly cut daffodils (10 stems) for $10. A vase is available for an additional $8.

Money from this American Cancer Society-sponsored event will go to research, education and patient services.

The deadline for an LLNL order is **Wednesday, March 13.**
Delivery will be on **Monday, March 25.**

Check the list below for the LLNL Daffodil Days volunteer nearest you who is accepting orders.

Name	Bldg.	Rm.	Phone
Arredondo, Loann	381	1360A	2-0626
Barnes, Tracey	111	580	3-9060
Bell, Christine	5980	109A	3-9447
Berkich, Tracy	071	1020	2-8246
Bertram, Sharon	261	1408	2-5853
Bishop, Sue	321A	1020C	2-9593
Breznik, Joanne	616	100	4-4101
Carter, Karen	234	1020	3-5934
Case, Naomi	253	1538	2-8026
Conrad, Janet	218	119	2-7561
Copp, Kathy	235	2070	4-2597
Curtis, Leslie	132N	1489	2-0217
Dewolf, Chris	543	1277	3-8348
Fread, Lanette	411	1422	2-9288
Garcia, Mona	121	1066	2-9858
Grandfield, Charlene	5475	1359	3-1779
Jess, Rhonda	3703	1245	4-3057
Jessup, Mary	231	1236	3-1760
Jimenez, Irene	511	213	3-1273
Lawrence, Sue	131	1020	3-3224
Lindsay, Karen	432	2003	4-4371
Mahler, Florann	211	136	2-9173
Marain, Alea	3725	429	2-3946
Mickels, Sharon	170	2110	3-9279
Miller, Margie	314	216	3-0265
Nelson-Lee, Jennifer	5426	1009	2-5750
Pereira, Kris	871	124	3-5245
Pierce, Sue	2679	1269	3-1094
Purpura, Gloria	1878	104	2-7281
Quick, Bonnie	451	2005	2-6510
Rodrigues, Lei Loni	131	2088	2-0654
Rutan, Dena	482	2234A	3-1813
Stone, Sharon	663	1000	2-7459
Sefcik, Cookie	3226	104	3-2242
Shuler, Jean	113	1030	3-1909
Springer, Frankie	111	332	3-6192
Sorensen, Nanette	2925	101	2-9670
Thomas, Karma	2775	1019	2-5300
Twiss, Carol	571/671	1138	2-9395
Watt, Maggie	332	1138	3-6003
Weyburn, Sandy	551E	221E	2-0840
Williams, Anita	132N	2254	2-4550
Yazzie, Darlene	132S	2121	3-7846
Ybarra, Corinne	482	2158	3-9501

CLASSIFIED ADS

See complete classified ad listings at https://www-ais.llnl.gov/newsline/ads/

AUTOMOBILE ACCESSORIES

Gear Vendors Overdrive. Brand New, in box GV-3DO375A unit. Lits Long Shaft Th400. Can be adapted to other applications. New:$2295 Sell For:$1550 925-932-3794

Tire P195 SR 14 and rim, full size spare for 240 series Volvo. $20 925-447-6775

AUTOMOBILES

1978 - Convertible VW, restored, approx. 5K miles on engine, new muffler, exhaust, tires. A real cutie. Blue w/white top & int. 209-835-5066

1964 - Corvette Coupe, White w/ blue interior. 350ci, 4 speed, side pipes,ps,pb. Attention getter, driven reg for 21 yrs. Reduced to $24,900, 925-447-8751

1958 - Chevy Pickup, Apache, longbed, runs, needs battery, new paint, some body damage on hood, new upholstery - Asking $3500. 209-833-6146

1985 - Chevy Suburban(Diesel)Needs some work, but is running.$1200. 209-956-3718

1994 - Ford Probe, 106K miles, 4cyl, 5 speed, AC, PW, PB, air bags, 10 disc CD changer, excellent condition $4,000 925-455-6643

1991 - Ford Probe, rebuilt transmission, four new tires, runs good, 122K miles, needs some body work $1200 408-945-0250

1967 - Buick Riviera Black on Black only 23,000+ original miles. Excellent Condition. AC All Power. Car has been stored in garage. $10,900 or Best Offer 925-443-6887

1993 - Ford Bronco, Eddie Bauer Edition, 4X4, CD player, AT, All Pwr., Excellent Condition, 161K miles $7500 or best offer 510-352-1614

1965 - Classic 1965 Chevy Chevelle 70% restored, new 350ci. 5k obo 209-858-5597

1986 - Honda Civic 4 door, 5 spd, white, good condition, all service records, 148K miles, $2000 or best offer. 925-828-7021

1998 - Plymouth Grand Voyager SE Minivan, 44K miles, fully loaded, maintained at dealer, excellent condition, transferable warranty $14,000. 925-447-7768

1994 - Camaro, V-6, white, 5-speed, clean, Bose stereo, new tires, alloy rims, 117k miles, cruise, very reliable, $5,000 OBO. 925-964-0534

1997 - GEO Prisim LSi Leather Auto Am/Fm/CD Very clean129K Miles Great gas mileage $6K obo 925-513-3538

1997 - GMC Jimmy SLE 4WD 4D Black AC PS PW Plocks Tilt Cruise AM/FM/CD ABS Pseat PrivGlass Towing RoofRack Alloys 83Mi Never offroad $9000 obo. Must sell 925-513-3538

1993 - Olds Bravada, AWD, White w/Grey Leather, All Options, Great Condition, New Tires, 145K Mi. $6250 OBO 925-687-0999

BICYCLES

26in Peugeot 12 spd road bike $40.00. 26in Peugeot lightweight 18 spd road/touring bike $50.00. 16in 5 spd mountain bike $15.00. Make offers 925-447-7907

Centurion 10 Speed, dark metallic blue, excellent cond. $50.00 OBO 925-455-1959

Girls bicycle, $15. 925-454-0877

BOATS

79 Apollo 25ft Fisherman. Slps 4, Head/Galley. Great for ocean salmon/delta stripers. Downriggers/electronics/93 gal.trlr. 85 V8,new I/O $9,900 925-447-7455

CAMERAS

Lenses for Nikons: 50 mm f/2 standard, 28 mm f/2.8 wide angle, 135mm f/2.8 telephoto, +filters. $50 OBO 925-449-4669

ELECTRONIC EQUIPMENT

Yamaha CR-220 Natural Sound Stereo Receiver with TEAC EQA-10 Stereo 10-Band Graphic Equalizer. Both over 20 years old. No speakers. Both for $20. 209-836-4349

27 inch RCA Colored Television, $150 or Best offer. 925-998-5935

Turbotax 2001 Premium and Turbotax 2001 for CA CDROMS. PC version, Both for $30 925-292-7799

Scanner,HP6200 w Adobe PhotoDelux, etc, 600 dpi, scans vert well, just got new one to scan slides. Orig $399, sell $80. 925-447-8415

JVC 12 disc changer for car. Model #CH-X200. 1 year old. Asking $80.00 OBO. 209-833-8306

GIVEAWAY

River bed rocks. FREE. Great for landscaping. You haul. Livermore. Anita Ct. Call Rob and Pam 925-606-7901

2 Concrete laundry sinks with stands, use as planter etc. 925-447-6775

Pulpit: Hand carved, 270 deg semi enclosed, raised step platform with script platen and shelf. Fine piece for community or worship functions. 925-560-9657

Miniature Schnauzer: Grey, 10yr old, neutered male. Healthy, adorable, very loving, enjoys car rides. Lonely, seeking companionship and new home. 209-599-5056

King size waterbed. 4 year old lumbar support mattress uses regular Cal King (deep pocket) sheets. 12 drawer pedestal. San Ramon. 925-968-9519

Power Mac 7100/66 free to suitable responder. Includes Apple 15 monitor and StyleWriter II printer. 925-447-2905

HOUSEHOLD

EcoQuest air purifier, never used. No extra filters needed. $500. 925-837-3073

Pine footlocker trunk; Maple hutch; contemporary table lamp; upright vacuum cleaner; oak computer desk. 925-443-2880

Blue and white plaid couch, wood trim, good condition asking $100.00. Queen Size matress boxsprings and frame $30.00. 925-447-7907

Coffee table and end table.Colonial style, Cherry finish. Good condition. $50 for both,OBO. Digital pictures available upon request. 925-803-9928

Large glass top dining table with 6 white chairs, $100 925-443-5044

Hunter green sofa, soft pillow-top style, only two years old, great condition. $300 OBO 925-455-4208

Italian Leather Sofa for living room. Set of 2, cream colored. $600 or Best offer. 925-998-5935

Three swivel oak barstools, $175.00. Oak coffee table half circle, top rotates for full circle, $45.00. Pine kitchen table w/four chairs, $200.00 209-824-8750

Singer commercial Sewing Machine, with stand. $100.00 or best offer. 925-362-0903

Maytag Washer & Dryer (white). Dryer belts six months new. Good condition, estate sale. Prefer selling as set. $250/OBO. 925-462-6503

Loveseats, excellent condition, sturdy fabric. See to appreciate. $85 each. 925-447-1826

Washer and Dryer, stackable apartment sized Kenmores, in good working condition. $100. or best offer. 925-485-0495

Oak Coffee Table and matching Oak End Tables. (parquet looking) a medium oak color. Great Shape. $60 for all. 209-832-7204

White Washed Oak entertainment section with lighted smoked glass cabinet doors and lighted mirror. Dimensions are approx. 6ftwx6fth. Asking $300.00. 925-513-9372

Amana side by side Refrigator, 22 cuft. very good condition, $250.00 209-836-1506

Dining Room Set Darkpine 6 chairs Hutch with glass $750.00 925-625-9215

Household items & furniture: Antique oak student desk w/ tilting writing surface; four ceiling fans; breadmaker; Microwave ovens. 925-443-2880

Victrola console record player. 1906 era. Includes assortment of records. Good working condition. $500/BO. After 5 PM 209-836-0116

Two aluminum 2 inch blinds, off white, 6 wide x 3 tall, $20/each. Various oak cabinet doors & drawers from small kitchen, medium color, $100 all. 925-294-9022

LOST & FOUND

FOUND: Gold Bracelet on 2/20/02 in SNL Parking Lot (near Guard Post). If yours, please call with description to claim. 925-447-6423

MISCELLANEOUS

Metal drafting table. Tilts and elevates. $50.00 OBO. 925-456-3010

Jet 6 inch PLANER/JOINER, good condition $150. Jet 14 inch BANDSAW, good condition $100. Will need a little steel wooling. 925-455-6884

Lathe Pasco (East Germany) auto threads, small 5 inch max cost $4300 make offer Mike Doty 209-823-6501

Vermeer 252 Stump Grinder with Kohler 25 Hp engine (does not have autosweep)in excellent condition. One owner and operator 11,250.00 or best offer. 925-443-6010

Two Audiovox 9100 Cell phones Tri-Mode w/CDMA Technology. Standard face-plates and one purple. 2 hands-free ear pc. Selling the package for $150. 209-825-2048

Mobile Shop Crane, 4000 pound capacity. $125.00 or best offer. 925-362-0903

Kirkwood lift ticket. I have one Kirkwood adult lift ticket for sale. Ticket good any time no restrictions. Kirkwood regular price $52, asking $40 925-606-1972

Sears heavyduty sander ($60), scroll saw ($60), electricians prof AC multmeter ($75) or offers 925-292-7799

Toddler toys: Fisher Price activity walker, $8. Chico Flip n Play activity table, $10. Tomy ball party, 2 sets, $10 each. Like new, 1/3 retail. 925-454-0877

Trans 300 credit card terminal and slider:$100. Spinning peg board display, 20 inches square by 66 inches tall: $60. After 5 PM 209-836-0116

Replacement vinyl windows (used) 1) 6w ft x 3h ft, $30, 2) 2w x 1h ft bathroom, $20. 925-294-9022

MOTORCYCLES

1996 - Harley Davidson RoadKing lots of extras only 9K miles mint cond. $16,250. 510-357-3995

2000 - Yamaha YZ426F, Street legal, Runs great, Exc. condition, E-Line Coil, Baja Designs Kit, Extras, $4,500 209-833-3785

1983 - Honda, 550 Nighthawk. New tires, pipe, paint. Lowered and in excellent condition. $1,500, offer. 925-449-5441

MUSIC INSTRUMENTS

A used guitar, an electronic tuner and a songbook—all for $35. Good for self-learned beginners! 925-600-8312

Fender Rhodes Electronic Keyboard and amplifier. $350/offer 925-829-2848

Suzuki violin, 1/4 size, Wolf violin headrest (1/2 size), Violin Strings, all like new. Make offer 925-292-7799

Sunlite complete drum kit with 14in Hi Hat, and 16in Crash cymbals. Hardware, throne, and pads included. Gently used. $350. 925-462-7180

PETS & SUPPLIES

Aquarium- Complete 10 gal glass aquarium. Includes flourescent hood, heater, pumps, filters, gravel, siphon vacuum, and much more. Free!! 925-373-8916

Dwarf Netherland Rabbit black, Doe. Very small rabbit, not yet full grown. Comes with all kinds of extras...except cage. 209-521-5062

RECREATION EQUIPMENT

Home Gym. Muscle II brand with work stations. Quality equipment. Moving, must sell. $300 925-513-2784

Dive gear, XL wetsuit, fins, booties, kife, weightbelt, gloves, etc. All new; must sell. No reasonable offer refused. 925-932-3839

Stationary Bike for Exercise,Almost never used. $50 or Best Offer 925-998-5935

Dodge Ridge Lift tickets. Two adult lift tickets, no restrictions good any time. Dodge Ridge Price $42, asking $30 each 925-606-1972

Dartboard, electronic Halex 3200-Q, up to 8 players. Paid $75. Never opened, still in box. $50. 925-648-0671

RIDESHARING

Express your commute, call 2-RIDE for more information or visit http://www-r.llnl.gov/tsmp their website.

Ceres/Modesto - 14 psgr Enterprise deluxe van, 7:00-3:30, $110/month 209-537-0229, ext. 3-6631

SERVICES

Exterior & Interior House Painting - Over 16 years exp. Call for free estimate. 209-956-3718

TUTORING in high school and college chemistry and math. 925-443-2095

Concrete: Custom,stamped,colored,foundations, flat work & more. Have portfolio. Lic#787092-B. Over 20 years experience. Free estimates. 209-833-8306

SHARED HOUSING

Livermore - Room for rent. Looking for a clean/responsible person to share my 2bd/1ba home. N/S. No pets. $650 + dep and 1/2 utilities. 925-443-2270

Livermore - 3 bdrm house, private bath, clean, no smokers/pets please, $525 mo. + 1/2 utilities 925-371-5587

Livermore - Room $550, 1 Acre,next to Vineyards,Spa,Bike to lab, Internet,digital Cable, Kitchen and laundry privileges 925-373-2910

Roommates Needed : Newer Home Vasco\580 Livermore, $700 month plus 1\3 utilities Fem. Pref. Avail. March 1st. 925-899-2766

Tracy - Bedroom for rent in beautiful home w/ pool. Full privileges, cable included. $500 + 1/3 util. 209-833-6443

Livermore - Wanted - Livermore room for rent, Mon-Thurs, private bathroom, smoke-free, pet-free environment, quiet hours 9:30pm-6am. 415-482-6685

TO TRADE

2 size 27X30 9 in.thick, 2 24X23 9 in. thick Down Cushions/Pillows-New. 925-735-6002

TRUCKS & TRAILERS

1997 - Ford F-350 crew-cab,auto trans, long bed, XLT, 4X4. 7.3liter Powerstroke. shell, tow pkg, Alpine stereo. New X/T tires, $21,000 OBO. 925-240-7019

1995 - Dodge, 3/4 ton Pickup, Diesel, Automatic, SLT, Towing Package, Vista Shell, Bed Liner, New Tires, Red/Grey, 58K, Excellent Condition, $15,500 925-447-7287

1989 - GMC Sierra 2500 4X4. extended cab, long bed, power, windows & locks, sliding rear window, bed liner, 9600 lb towing capacity. $7500 or best offer 925-443-8656

1990 - Ford F-250, Extended Cab, XLT Lariet, 7.3 Diesel w/Banks Power Pack, recent tires & shocks, many extras. $6250 OBO. 209-946-0645

1995 - 1995 Toyota SR-5 4-Runner, 2-WD,A/T, 23,000 mi,original owner,x-cond. $14,500 925-447-5399

1997 - Dodge Ram, club cab, 4X4, 1/2ton, short bed, V8, power windows/locks, cruise, tilt, A/C, AM/FM tape, New tires, tow package.$16,000 925-606-1972

1987 - 26 ft Companion trailer by Kit. Triple bunks, AC, MW, softa bed, great condition, great for families. $4500 or bo. 925-447-5359

1993 - Toyota, t-100,pickup truck.auto,a/c,new tires,bedliner. runs and looks great! call for info.asking $6950. eves only. 925-243-1373

2000 - Chevy Z71,ext.cab. 17K miles, fully loaded. 25K OBO. 209-832-1105

1991 - Ford Explorer XLT 4x4.130K mi,SecuritySystem, Silver/Black, A/T,A/C, PwrSteer, PwrWin,MoonRoof,AM/FM/Cassette .$4750/obo 925-447-0083

1976 - 26ft. Nomad Trailer, Good condition $1,500.00 209-936-9356 925-447-7768

VACATION RENTALS

SOUTH LAKE TAHOE - 3 Bedroom 2 bath Chalet, newly remodeled, nicely furnished,all amenities,close to all skiing, Reserve Now! 209-599-4644

Maui, HI - Kahana Reef oceanfront 1BR/1BA condominium. Beautiful two-island view, oceanside pool, and BBQs. Low LLNL rates for year-round reservations. 925-449-0761

Maui - Embassy Suites - right by the ocean!1 bdrm suite w/ full kitchen for one week; up to 4 people. Scenic view - beautiful! LLNL discount. 209-832-2790

Maui - Condo, RCI Gold Crown, large 1 bed room, 2 bath, sleeps 4, avail. May 9-16 or trade for other times. 925-447-0856

WANTED

WANTED: 4 GIANTs tickets for regular season. Also WANTED: 6 GIANTs tickets for regular season. Call Beth or Kurt at 510-635-2734

WANTED: Metal or wood storage shed 8ft. x 10ft. If it meets the need I will tear down and move. 209-892-5885

Gate for small livestock. Rough dim. 6 feet long x 4 high. 209-892-6186

Wanted: Epson 1160 printer. Need for specific application. Call Jay. 925-784-5669

Childrens wood play structure w/fort, swings and slide 925-837-8533

Wanted used panty hose and stockings in any condition.Items will be used by Eastern Star members, as stuffing for physical therapy balls. 925-606-1972

Someone answered my ad on needing autocad 2000 or greater. Please call back, your phone number did not work. 510-791-8623

Wanted, LP record turntable in good condition. 925-292-7799

Want 20 inch girls bike in good condition. 925-447-9647

Queen bedroom set for guest room. Reasonable. Bridge with nightstands OK. Do not need mattress or boxspring. 925-243-0760

Need someone to do some simple sewing - trim on curtains. Long curtain. 925-443-7901

Used billiard pool table. Any model. Call Denise 925-454-0931

Housekeeper for Dublin or Livermore area, every two weeks. 925-833-6061

Games for Super Nintendo wanted. 925-455-1730

Want bunk bed; email me hokkaido2@hotmail.com or (hearing-impaired) call relay 1-800-735-2922 & ask for TDD 925-862-2275

Due to space limitations, *Newsline* may withhold ads that have already run. They will still appear on the Web.

Engineering good, clean fun

Middle school students from around the Tri-Valley and Central Valley, including those from the Art Freiler School for Science, Technology and Research in Tracy (left, below), recently explored the numerous facets of engineering at the annual Engineering Day celebration, hosted in the West Cafe and Bldg 123.

JUILIE KORHUMMEL/NEWSLINE

BBRP

Continued from page 1

the explosion of genetic data developed over the past decade to address challenges in biodefense, energy and environment, and human health," Weinstein explained. "Biology is undergoing a great transformation from being a qualitative, observation-based science to being driven by huge data sets, high-throughput analytical measurements, and quantitative modeling."

In his view, BBRP and its partner directorates have the multidisciplinary capabilities to play an important role in this new biology, along with addressing national security missions related to biology.

Through the reorganization, Weinstein sees several advantages: responsiveness to new scientific opportunities, enhanced communications in smaller divisions and increased opportunities for younger research staff.

Four of the divisions will be devoted to specific scientific missions, while the other two divisions will be foundational for the science of the entire program with measurement and modeling capabilities.

Among the directorate's mission divisions are:

• Biodefense Division, which will provide the science and tools needed to combat bioterrorism. Biomedical scientist Ken Turteltaub has been selected to head this new division.

• Genome Regulation and Function Division, which will focus on the follow-on work to the Human Genome Project. The Walnut Creek-based Joint Genome Institute has worked to map chromosomes 5, 16 and 19 and identify their genes. Now this Livermore division will study how genes are regulated to work together, how and where in different tissues they produce proteins and how they affect biological functions. Biomedical scientist Lisa Stubbs has been named to head this division.

• Health Effects Genetics Division, which will study how low-dose radiation and chemical exposures cause genetic effects and thereby impact human health. This division is conducting research into the biochemistry and genetics of DNA repair, the transcriptome and proteome (messenger RNA and proteins) responses of exposed cells, intermediate genetic and chromosomal damage, and developing new methods for evaluating genetic susceptibility of cells, tissues, and individuals. This research will help in understanding the cellular and genetic mechanisms that lead to reproductive abnormalities, developmental defects, and cancer. Biomedical researcher Andrew Wyrobek will lead this division.

• Environmental Microbiology Division, which will be a new effort within BBRP. This division will work to understand microbes in the environment and how they relate to energy production, environmental protection and clean-up. The division leader position has been posted.

The other two divisions — Computational and Systems Biology, and Quantitative Structures and Dynamics — are groups that Weinstein believes will establish the foundation for performing the directorate's science.

Michael Colvin has been selected to lead the Computational and Systems Biology Division. This division will use the Laboratory's capabilities in large-scale computing to model the molecular and biological processes important in BBRP research across the board.

The division leader job for Quantitative Structures and Dynamics has been posted. This division will focus on developing and using state-of-the-art molecular, biochemical and structural measurements to understand biological processes and develop data that can be used to build and test computational models.

"Our scientists are at the forefront of integrating computation and experimentation in bioscience," Weinstein said. "We are bringing computer modeling into the same essential role in bioscience that it plays in physics and engineering.

"Large-scale computational modeling has been a hallmark of the Lab since its beginning. Now we are developing the capability of making the leap to model some of the human body's complex biological processes."

Among the processes the division will study are how individual atoms act inside DNA, where and when specific genes are activated or "expressed," how proteins form as three-dimensional objects, how sets of proteins carry out biological functions, and how chemical signals control the function of individual cells and of groups of cells such as in microbial communities or in tissues and organs.

As one of its functions, the Quantitative Structures and Dynamics Division will build on existing Livermore capabilities in accelerator mass spectrometry, DNA and protein measurements, X-ray crystallography and nuclear magnetic resonance measurements, plus develop new capabilities, Weinstein said.

Three of the areas in which the division will lead development or use state-of-the-art techniques are: monitoring chemical changes inside individual cells, monitoring cell-to-cell communication, and measuring the physical and chemical attributes of cells, or groups of cells.

"Our vision is that researchers in this area will be monitoring the biochemical processes in living systems with extreme precision, and make huge amounts of data available for computational modeling," Weinstein explained.

During the past decade, the BBRP directorate has undergone substantial growth, expanding from a staff of 150 people and a $22 million budget to about 275 people with a $45 million budget.

THE BACK PAGE

DIRECTOR'S OFFICE

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ic challenges at the forefront of all our mission areas: national security, energy and environment, bioscience and biotechnology, and fundamental science and technology explorations.

The Council on Strategic Science and Technology (CSST) will meet next week to define the process for reviewing the portfolio of Grand Challenge ideas. In the meantime, the Laboratory Science and Technology Office (LSTO) is performing an initial assessment of the submitted white papers to identify those that are consistent with the Grand Challenge concept. From this assessment, the LSTO may recommend some of the ideas for near-term funding through the Laboratory Directed Research and Development (LDRD) Program or other sources of internal funding. LSTO will present the results of its initial assessment to the CSST.

From the ideas we've received so far, it's clear that the Grand Challenge concept has already stimulated innovative approaches to solving important national challenges. I am very encouraged by the response to the call for Grand Challenge ideas and look forward to working with you to turn these ideas into exciting programs.

NNSA

Continued from page 1

later this year, the NNSA's eight contractor operated national security laboratories and weapons production plants will report to the administrator through an NNSA site office. Currently, there are two federal field management layers — an operations office and local area offices — between NNSA headquarters officials and contractor employees. Operations Offices such as Oakland, Albuquerque and Las Vegas will be converted to federally staffed service centers to provide support, such as human resources, finance and procurement, to the eight NNSA site offices.

Some NNSA-related science and technical positions at the Oakland office would likely be shifted to the site office at the Lab.

The reorganization will move many key decision-making responsibilities from headquarters to the field, closer to where the work is actually being done. For example, contract and project management oversight responsibility will rest with each NNSA site office. Headquarters will be responsible for strategic and program planning, budgeting and oversight of research, development and nonproliferation activities.

"These changes will help us achieve the goals set by Congress when it established NNSA," said Gordon. "By clearly defining roles and responsibilities between NNSA employees at headquarters and in the field, we will increase accountability and reduce duplication. We need to make sure that we have people doing the right jobs in the right places to be most effective in carrying out our important national security mission."

Gordon's reorganization plan follows changes that NNSA has put into effect over the past eight months, including consolidating headquarters support functions, establishing a management council to integrate decision making throughout NNSA, further defining NNSA's relationship with the Energy Department through streamlining external oversight, and establishing an independent federal human resource management capability. NNSA is also implementing an integrated Planning, Programming, Budgeting and Evaluation system to establish improved long-range planning and budgeting tools.

NNSA's report outlines a strategy to reduce administrative burdens for its contractor organizations by streamlining policies, procedures and staffing. For example, unnecessary details regarding how a task will be done will be eliminated from NNSA policy, guidance, orders and contracts. Already efforts are under way at various NNSA facilities. Sandia is in the process of designing a "new governance strategy," which will bring best practices in the private sector to laboratory management, while LLNL is working on its own initiative to reduce administration and operational workload. (see accompanying story).

"Contractors will be given more clear and consistent expectations and will be held accountable for achieving results in a manner that is consistent with our mission. They will also be expected to comply with all environment, safety and health and safeguards and security policies," said Gordon.

"I believe that NNSA's new structure will establish an efficient, responsive organization that is focused on achieving our mission through the wise use of tax dollars and through effective use of our employees." Gordon said in his letter. "As we move to a system that will help us do our jobs better, we will increase our credibility on Capitol Hill and improve confidence that we are using talents fully and effectively."

A copy of the report is available online at www.nnsa.doe.gov

MATTER

Continued from page 1

far away as Germany to attend, though the majority of the 80 registered participants came from the Lab. The workshop chairmen were Richard Lee, John Molitoris, and Mike McElfresh, director of the Materials Research Institute.

According to McElfresh, organizers wanted to define the role that the Lab will play in the rapidly emerging area of warm dense matter research, and in understanding its importance to stockpile stewardship. Work in the warm dense matter regime has ramped up over the past two years. Experiments were performed at major facilities like HEAF, as well as smaller on- and off-site experiments.

"It was time to bring all these research projects together, to compare notes and stimulate the theoretical community. We wanted to determine where we're going next, and develop a plan to get there," McElfresh explained.

Bill Bookless, deputy associate director for Defense & Nuclear Technology, introduced the workshop, emphasizing the need to understand how matter transitions through this regime.

Christian Mailhiot, chief scientist for Chemistry & Materials Science, opened the proceedings stressing the importance of warm dense matter and how to address the field. "We're witnessing the emergence of new technological tools to study warm dense matter. As an emergent area, we want to make sure we're deriving the most from the technology," Mailhiot said.

The workshop focused the Lab's efforts by examining present and future research using drivers such as the current synchrotron and future FEL-based light sources, energetic materials (like high explosives), ion-beams, lasers, diamond-anvil cells and mechanical impact techniques. Participants reviewed current experimental and theoretical tools covering the relevant pressure, temperature, and density-phase space accessible by each method.

"The workshop was successful, because knowledgeable people discussed technical issues in an effective way. We learned that establishing equilibrium is more of a problem than we thought," McElfresh summarized, "but that's not too surprising for a regime where the answers appear to be a moving target."

McElfresh added that what we learn in the future in this area will have practical applications in stockpile stewardship, geophysics, inertial confinement fusion, ICF target design, and the astrophysics of cooler stars and bigger planets. The answers we uncover can help us understand what lies within the center of planets, and explain magnetic fields around Jupiter.

The workshop also attempted to evaluate the future role of NIF research in the warm dense matter regime. NIF experiments in this area can begin as soon as NIF's first four-beam quad becomes operational.

McElfresh emphasized the Lab's history of pushing the frontiers of materials at extreme conditions, and addressing highly relevant areas. To promote research in warm dense matter and focus it on scientific issues, annual workshops are planned, and a working group is being formed. Researchers interested in participating should call him at 2-8686 or send e-mail to mcelfresh1@llnl.gov.

WORKLOAD

Continued from page 1

the recent employee survey, a number of focus groups held during Science Day last year, and the National Nuclear Security Administration's own efforts to streamline operations and oversight. NNSA unveiled its organization plan earlier this week.

"A growing number of employees believe the Lab is rapidly losing its ability to effectively carry out its programmatic missions – largely because operational requirements and processes are not implemented efficiently," explained Hurd, the associate deputy director for Strategic Operations. "This plan will eliminate some of the operational barriers and let scientists concentrate on their programmatic goals."

The Workload Reduction Initiative will clarify roles and responsibilities and pave the way for programs to operate more effectively and efficiently.

Areas targeted for reduction of procedures and processes include Integrated Safety Management, the internal decision making processes and possible elimination of some required signatures, shortening the hiring process, and streamlining LDRD and Work For Others approval processes, among others.

Hurd emphasized that while the Workload Reduction effort will concentrate on streamlining, "we will continue to maintain our high standards for safety and security."

More details about the Workload Reduction Initiative will appear in upcoming issues of *Newsline*.

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